

REMARKS

Initially, Applicants wish to thank the Examiner for the courtesy extended to the undersigned during the telephonic interview conducted on February 1, 2005. The following reflects issues discussed during that interview.

By this Amendment, Applicants amend claims 23, 25, 27 and 29. With claims 1-16 having been canceled and claims 17-22 having been withdrawn, claims 17-30 are pending in this application. In the Office Action of September 9, 2004,¹ claims 23-30 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,611,181 to *Fukumura et al.* ("*Fukumura*") in view of Japanese Pub. No. 08265044 A ("*Taketoshi*"), U.S. Patent No. 5,777,524 to *Wojewoda et al.* ("*Wojewoda*") and Japanese Pub. No. 09307355 A ("*Osamu*"). Applicants address the rejection below.

I. Regarding the nature of the rejection

The Examiner states (Office Action "OA" at 2):

"[c]laims 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Fukumura et al.* . . . and further in view of *Taketoshi et al.* . . . and *Wojewoda et al.* . . . and *Osamu* . . . (hereafter *Fukumura*, *Taketoshi*, *Wojewoda* and *Osamu* . . . for claims 25 and 29 only . . .)"

Applicants submit that the Examiner's application of *Osamu* as set forth in the Office Action is unclear and improper. During the interview, the Examiner indicated that *Osamu* is being applied only to claims 25 and 29. Applicants therefore address *Osamu* only with respect to claims 25 and 29, and their dependent claims 26 and 30.

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

Although *Osamu*'s application to the claims was clarified in the interview, Applicants submit that the rejection in the Office Action is improper. Should the Examiner continue to dispute the patentability of claims 25 and 29 in view of *Osamu*, the Examiner should provide a separate rejection for those claims with an appropriate statutory basis associated with *Osamu*. Applicants call attention to M.P.E.P. § 707.07, which makes clear that "[t]he examiner should designate the *statutory basis* for any ground of rejection by express reference to a section of 35 U.S.C. in the opening sentence of each ground of rejection" and that "[a] plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group" (emphasis added).

II. A case for *prima facie* obviousness has not been established

Applicants traverse the rejection of claims 23-30 under 35 U.S.C. § 103(a) because a case for *prima facie* obviousness has not been established. To establish *prima facie* obviousness under 35 U.S.C. § 103(a), three requirements must be met. First, the applied references, taken alone or in combination, must teach or suggest each and every element recited in the claims. *See* M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the reference(s) or in the knowledge generally available to one of ordinary skill in the art, to combine or modify the reference(s) in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must "be found in the prior art, and not be based on applicant's disclosure." M.P.E.P. § 2143 (8th ed. 2001).

Independent claim 23 recites a combination including:

first storage means for storing corrected temperatures each of which corresponds to one of a plurality of detected ambient temperatures, the detected ambient temperatures being within a temperature range that is to be corrected and that is a detection

characteristic of the temperature detecting means, and said corrected temperatures being set at values for correcting detection errors in the detected ambient temperatures;

second storage means for storing operation correction data prepared for correcting a temperature characteristic of the electronic circuit; and

correction processing means for selectively reading, from the first storage means, one of the corrected temperatures corresponding to the ambient temperature detected by the temperature detecting means, and for correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in the second storing means corresponding to the corrected temperature.

As affirmed by the Examiner, *Fukumura* does not teach or suggest “storing corrected temperatures . . .” and “storing operation correction data . . .” (OA at 3: lines 4-10). Indeed, *Fukumura* fails to teach or suggest the claimed “first storage means” and “second storage means.”

In addition, as discussed in the interview, Applicants submit that *Fukumura* does not teach or suggest the claimed “correction processing means.” The Examiner notes *Fukumura*’s disclosure of a “control section 2” included in a “temperature-compensated oscillation device” (see Office Action, “OA” at 2-3; *Fukumura*, FIG. 5 and associated description). Neither *Fukumura*’s control section 2 nor any other disclosed element constitutes the “correction processing means” recited in claim 23. According to *Fukumura*, control section 2 includes a ROM (21), a comparator (22) and an up-down counter (23). With *Fukumura*’s system, an analog ambient temperature data signal from a sensor is quantized into a digital temperature value. *Fukumura*’s control section 2 converts a variation in this digital temperature value into “a plurality of time-divided fractional variations in the output of the counter 23,” which is applied to a voltage-controlled oscillator (VCO) to “temperature-compensate the frequency of an oscillation signal” (col. 3, lines 52 – col. 4, line 34; FIG. 5). Although *Fukumura* mentions controlling

frequency of an oscillation device, it does teach or suggest “selectively reading, from the first storage means, one of the corrected temperatures corresponding to the ambient temperature detected by the temperature detecting means” and “correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in the second storing means corresponding to the corrected temperature,” as recited in claim 23.

Fukumura merely describes controlling frequency using time-divided fractional variations in the output of a counter.

Furthermore, the Examiner conceded that *Fukumura* does not disclose storing corrected temperatures and operation correction data, as claimed. Because *Fukumura* does not disclose storing corrected temperatures and operation data, as acknowledged by the Examiner, *Fukumura* cannot, as discussed in the interview, disclose correcting operation of a circuit based on those stored corrected temperatures and that stored operation correction data. For at least the foregoing reasons, *Fukumura* does not teach or suggest at least the *first storage means*, *second storage means* and *correction processing means* recited in claim 23.

In the interview, the Examiner indicated that each word of the claim need not be found in the prior art and that the “concept” of the claimed “correction processing means” is present in *Fukumura*. Applicants disagree. While claims are to be given their broadest reasonable interpretation during prosecution, each and every claimed feature must be taught or suggested in the prior art to establish *prima facie* obviousness and each word must be considered. Applicants call attention to M.P.E.P. § 2143.03, which states:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) . . . (emphasis added).

For at least the reasons presented above, Applicants submit that *Fukumura* does not teach or suggest at least the claimed “correction processing means.” Even if *Fukumura* were construed as disclosing a correction processing “concept,” that concept would not teach or suggest “correction processing means” for:

selectively reading, from the first storage means, one of the corrected temperatures corresponding to the ambient temperature detected by the temperature detecting means, and for correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in the second storing means corresponding to the corrected temperature.

Taketoshi does not cure *Fukumura*’s deficiencies. *Taketoshi* describes sensing a temperature of a crystal vibrator with a temperature sensor (8). (Abstract: Constitution). *Taketoshi* mentions an EEPROM (9) that “stores plural kinds of transmission signal patterns and . . . offset data quantizing a temperature characteristic curve of the crystal vibrator . . . over a prescribed temperature range” (Abstract: Constitution). *Taketoshi* does not teach or suggest at least “first storage means for storing corrected temperatures” and “correction processing means,” as claimed.

Wojewoda does not cure the deficiencies of *Fukumura* and *Taketoshi*. *Wojewoda* describes a “temperature compensating circuit . . . for a crystal oscillator module” (Abstract). *Wojewoda*’s describes providing “temperature compensating digital data” from a memory (28) to the crystal oscillator module” (col. 2, lines 13-20). According to *Wojewoda*, the compensating digital data corresponds to the “frequency deviation of the crystal oscillator module . . . over temperature” (col. 3, lines 15-22; *see* col. 5, lines 60-64; *see also* col. 6, lines 7-12). *Wojewoda* describes “coupling . . . [a] temperature-dependent signal [corresponding to an ambient temperature] to the memory such that digital data corresponding to the frequency variation . . . at the ambient temperature is provided” (col. 7, lines 5-15; FIG. 4). This digital data is applied to a

signal generator and a compensation signal is provided to a tuning circuit of the oscillator.

Wojewoda does not teach or suggest at least “first storage means for storing corrected temperatures” and “correction processing means,” as recited in claim 23. For example, providing a compensation signal based on digital data corresponding to a frequency variation at an ambient temperature does not constitute “selectively reading, from [a] . . . first storage means, one of the corrected temperatures corresponding to the ambient temperature detected by the temperature detecting means” and “correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in [a] . . . second storing means corresponding to the corrected temperature,” as claimed.

Accordingly, neither *Fukumura*, *Taketoshi*, nor *Wojewoda*, nor any combination thereof, teaches or suggests each and every feature of claim 23. As such, *prima facie* obviousness has not been established based on those references.

Moreover, *prima facie* obviousness has not been established at least because the requisite motivation to modify *Fukumura* in view of *Taketoshi* and *Wojewoda* is lacking. Determinations of obviousness must be supported by evidence on the record. See *In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001) (finding that the factual determinations central to the issue of patentability, including conclusions of obviousness by the Board, must be supported by “substantial evidence”). Further, the desire to combine references must be proved with “substantial evidence” that is a result of a “thorough and searching” factual inquiry. *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002) (quoting *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52).

In this case, the Office Action does not show, by substantial evidence, that a skilled artisan considering the cited art, and not having the benefit of Applicants’ disclosure, would have

been motivated to combine those references in a manner resulting in Applicants' claimed combination. The Examiner alleged that a skilled artisan would have modified *Fukumura* "to provide means for the system to perform quick look-ups and corrections for quick and accurate results as well as anticipating the operational environment" (OA at 3). This allegation in the Office Action is not properly supported and does not establish that a skilled artisan would have modified *Fukumura* as alleged. For example, the Examiner does not provide substantial evidence from the applied references relating to "quick look-ups and corrections" or "anticipating the operational environment." Indeed, the Office Action does not show the alleged motivation to be present in the relied-upon art or in the knowledge generally available to one skilled in the art.

Applicants call attention to M.P.E.P. § 2143.01, which makes clear that: "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination" (citations omitted). The Office Action does not show that the cited art "suggests the desirability" of the alleged modification, and it provides no objective reason from the references for the combination. Applicants submit that the conclusions in the Office Action were not reached based on facts gleaned from the cited references and that, instead, teachings of the present application were improperly used to reconstruct the prior art.

For at least the foregoing reasons, *prima facie* obviousness has not been established with respect to claim 23 and the § 103(a) rejection of that claim should be withdrawn.

Independent claim 25 recites a combination including:

first storage means for storing corrected temperatures each of which corresponds to one of a plurality of detected ambient temperatures, said corrected temperatures being set at values for correcting detection errors in the detected ambient temperatures on

the basis of a difference between a measure temperature measured with respect to a representative temperature and an expectation temperature expected with respect to the representative temperature . . .

second storage means for storing operation correction data prepared for correcting a temperature characteristic of the electronic circuit; and

correction processing means for selectively reading, from the first storage means, a corrected temperature corresponding to the ambient temperature detected by the temperature detecting means, and for correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in the second storing means corresponding to the corrected temperature.

As affirmed by the Examiner, *Fukumura* fails to teach or suggest “storing corrected temperatures . . .” and “storing operation correction data . . .” as recited in claim 25 (OA at 3: lines 4-10, lines 21-22). In addition, while claim 25 is of different scope than claim 23, *Fukumura* fails to teach or suggest the “correction processing means” of claim 25 for at least reasons similar to those presented above in connection with claim 23.

As explained above in connection with claim 23, neither *Taketoshi* nor *Wojewoda* cures *Fukumura*’s deficiencies. Moreover, *Osamu* does not cure the deficiencies of *Fukumura*, *Taketoshi* and *Wojewoda*. *Osamu* describes a thermistor (1) that “measures environmental temperature” and a “correcting means 2 [that] corrects measuring error depending on the temperature . . .” (Abstract: Solution). *Osamu* also mentions a “frequency correcting means” that predicts a temperature characteristic curve “by corrected temperature data and a previously set parameter” (Abstract: Solution). From what Applicants can discern from *Osamu*, the temperature correction data is obtained by a formula-based computing process and the correction data changes depending on the temperatures. *Osamu* does not teach or suggest at least correction processing means for “selectively reading, from [a] . . . first storage means, a corrected

temperature corresponding to the ambient temperature detected by the temperature detecting means” and “correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in [a] . . . second storing means corresponding to the corrected temperature,” as recited in claim 25.

Accordingly, the applied references, taken alone or in combination, do not teach or suggest each and every feature of claim 25. Moreover, for at least the reasons presented above, the requisite motivation to modify *Fukumura* in view of *Taketoshi*, *Wojewoda* and *Osamu* is lacking. For at least these reasons, *prima facie* obviousness has not been established and the § 103(a) rejection of claim 25 should be withdrawn.

Independent claim 27 recites a combination including:

first storage means for storing corrected temperatures each of which corresponds to one of a plurality of detected ambient temperatures, the detected ambient temperatures being within a temperature range that is to be corrected and that is a detection characteristic of the temperature detecting means, and said corrected temperatures being set at values for correcting detection errors in the detected ambient temperatures;

second storage means for storing operation correction data prepared for correcting a temperature characteristic of the electronic circuit; and

correction processing means for selectively reading, from the first storage means, a corrected temperature corresponding to the ambient temperature of the electronic circuit detected by the temperature detecting means during operation, and for correcting the operation of the electronic circuit on the basis of the corrected temperature and operation correction data stored in the second storing means corresponding to the corrected temperature.

Although claim 27 is of different scope than claim 23, the rejection of claim 27 under 35 U.S.C. § 103(a) should be withdrawn for at least reasons similar to those presented above in connection with claim 23.

Independent claim 29 recites a combination including:

first storage means for storing corrected temperatures each of which corresponds to one of a plurality of detected ambient temperatures, said corrected temperatures being set at values for correcting detection errors in the detected ambient temperatures on the basis of a difference between a measure temperature measured with respect to a representative temperature and an expectation temperature expected with respect to the representative temperature, said representative temperature being a temperature within a temperature range that is to be corrected and that is a detection characteristic of said temperature detecting means;

second storage means for storing operation correction data prepared for correcting a temperature characteristic of the electronic circuit; and

correction processing means for selectively reading, from the first storage means, a corrected temperature corresponding to the current ambient temperature detected by the temperature detecting means, and for correcting the operation of the electronic circuit on the basis of the corrected temperature and the operation correction data stored in the second storing means prepared for correcting a temperature characteristic of the electronic circuit.

Although claim 29 is of different scope than claim 25, the rejection of claim 29 under 35 U.S.C. § 103(a) should be withdrawn for at least reasons similar to those presented above in connection with claim 25.

Claims 24, 26, 28 and 30 depend upon base claims 23, 25, 27 and 29 respectively. The rejection of claims 24, 26, 28 and 30 should be withdrawn for at least reasons similar to those presented above in connection with claims 23, 25, 27 and 29. For the foregoing reasons, Applicants request withdrawal of the rejection of claims 23-30 under 35 U.S.C. § 103(a).


The claimed invention is neither anticipated nor rendered obvious in view of the references cited against this application. Applicants request the Examiner's reconsideration of the application in view of the foregoing, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: February 7, 2005

By: 
Frank A. Italiano
Reg. No. 53,056